UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,766	08/31/2000	Douglas Gourlay	CISCO-2357	3544

			EXAMINER
7590	12/02/2003		LEE, PHILIP C

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ART UNIT	PAPER NUMBER
2154	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/652,766	GOURLAY ET AL.
	Examiner	Art Unit
	Philip C Lee	2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

    A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>03 January 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-33</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
    since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
    37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
    reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .   6)☐ Other: .

DETAILED ACTION

1.   Claims 1-33 are presented for examination.

2.   It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant all future correspondence should include the recommended line numbering.

Claim Rejections – 35 USC 112

3.   Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

      a.   The following terms lack proper antecedent basis:

           i.   the closest content serving sites – claims 1, 14 and 20-21.

           ii.   the transit times – claims 1 and 20-21.

           iii.   the content serving sites – claims 1, 14 and 20-21.

           iv.   the lowest transit times – claims 1 and 20-21.

           v.   the method – claim 20.

           vi.   said original location – claim 25.

vii.   the time – claim 27.

b.   Claim language in the following claims is not clearly understood:

i.   As per claims 1 (line 7), 2 (line 2), 14 (line 2), 20 (line 9), 21 (line 5) and

22 (line 2), it is uncertain what is "DNS" refers to [i.e. please expand on

abbreviation.].

ii.   As per claim 3, line 6, it is unclear if "said receiving" refers to "receiving

data" in claim 2, line 7 or "receiving a reply" in claim 3, line 3.

iii.   As per claim 23, line 6, it is unclear if "said receiving" refers to "means

for receiving data" in claim 22, line 7 or "means for receiving a reply" in claim

23, line 4.

iv.   As per claim 24, line 9, it is unclear what is "each of the each of said n

fastest content serving sites".

Claim Rejections – 35 USC 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United
States before the invention thereof by the applicant for patent, or on an international application by another who
has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention
thereof by the applicant for patent.

5.   The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

6.   Claims 14 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Emens

et al, U.S. Patent 6,606,643 (hereinafter Emens).

7.   As per claim 14, Emens taught the invention as claimed for using a phased learning

approach for determining the closest content serving sites to a fixed location in a computer

network including:

A DNS request receiver coupled to the fixed location (col. 7, lines 60-62);

A response time determiner coupled to said DNS request receiver and coupled to the

content serving sites (col. 7, lines 49-54);

A query sender coupled to said response time determiner and coupled to the content

serving sites (col. 7, lines 49-54; col. 8, lines 25-40);

A data receiver coupled to the fixed location (col. 7, lines 60-62);

A memory coupled to said query sender (col. 10, lines 3-13); and

A data storer coupled to said data receiver and coupled to said memory (col. 10, lines 3-

13).

8.   As per claim 16, Emens substantially taught the invention as claimed in claim 14. Emens

further taught wherein said query sender includes a query timer (col. 9, lines 26-32).

9.   As per claim 17, Emens substantially taught the invention as claimed in claim 14. Emens

further taught wherein said response time determiner includes a pinger and a reply receiver (col.

10, lines 14-21).

10.   As per claim 18, Emens substantially taught the invention as claimed in claim 14. Emens

further taught wherein said query sender includes a response time orderer (col. 10, lines 28-35).

Claim Rejections – 35 USC 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

12.   Claims 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emens, U.S.

Patent 6,606,643 (hereinafter Emens).

13.   As per claim 15, Emens taught the invention substantially as claimed in claim 14. Emens

did not teach wherein said response time determiner includes an n fastest content serving site

chooser and an m other content serving site chooser. However, Emens taught wherein said

response time determiner includes a mirror server manager for choosing the n fastest content

serving site and m other content serving site (col. 10, lines 28-42). It would have been obvious

to one of ordinary skill in the art at the time the invention was made to modify the teaching of

Emens by including an n fastest content serving site chooser and a m other content serving site

chooser because doing so would increase the field of use in their systems with different

configurations.

14.   Claims 1-5, 7-13, 19-25 and 27-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Emens in view of Midorikawa et al, U.S. Patent 5,953,708 (hereinafter

Midorikawa).

15.   As per claims 1 and 20-21, Emens taught the invention substantially as claimed for using

a phased learning approach for determining the closest content serving sites to a fixed location in

a computer network including:

        In an execution phase:

                receiving a DNS request from said fixed location (col. 3, lines 28-37; col. 8, lines

        20-21);

                determining a response time for each of n fastest content serving sites and m other

        content serving sites (col. 3, lines 38-58; col. 5, lines 1-17; col. 8, lines 21-36), said n

        fastest content serving sites chosen by using said data and choosing the n content serving

sites with the lowest transit times (col. 10, lines 28-42), said m other content serving sites

chosen by selecting new content serving sites as well as randomly selecting old content

serving sites (col. 10, lines 9-12);

receiving data from said fixed location as to the transit times of each of the n

fastest content serving sites and m other content serving sites (col. 3, lines 47-58); and

storing said data in said table (col. 10, lines 28-35).

16. Emens did not teach a setup phase and a method of sending queries to each of the content

serving sites using the response time. Midorikawa taught a system including:

In a setup phase:

storing data as to the transit times of each of the content serving sites in a table

(col. 15, lines 28-57);

In an execution phase:

sending queries to each of the n fastest content serving sites and m other content

serving sites, timing said queries so that they arrive at each of the n fastest content

serving sites and m other content serving sites at the same time by using said response

time for each of the n fastest content serving sites and m other content serving sites (col.

5, lines 13-40).

17. It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Emens and Midorikawa because Midorikawa's method of

sending queries to each of the content serving sites using the response time for each of the

content serving sites would increase the fairness of each of the content serving sites receiving the

queries by avoiding disadvantages in transmission time with respect to a sender of the queries

and by allowing each content serving sites to receive the queries at the same time (abstract).

18.   As per claims 2 and 22, Emens further taught the invention wherein said setup phase

includes:

    receiving a DNS request from said fixed location (col. 3, lines 28-37);

    determining a response time for each of the content serving sites (col. 3, lines 38-58; col.

    5, lines 1-17; col. 8, lines 21-36);

    receiving data from said fixed location as to the transit times of each of the content

    serving sites (col. 3, lines 47-58);

    storing said data in a table (col. 10, lines 28-35).

19.   Emens did not teach a method of sending queries to each of the content serving sites

using the response time. Midorikawa taught a system including:

    sending queries to each of the content serving sites, timing said queries so that they arrive

    at each of the content serving sites at the same time by using said response time for each

    of the content serving sites (col. 5, lines 13-40).

20.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Emens and Midorikawa because Midorikawa's method of

sending queries to each of the content serving sites using the response time for each of the

content serving sites would increase the fairness of each of the content serving sites receiving the

queries by avoiding disadvantages in transmission time with respect to a sender of the queries

and by allowing each content serving sites to receive the queries at the same time (abstract).

21.   As per claims 3-4 and 23-24, Emens further taught wherein said determining the response

time for each of the content serving sites includes:

     pinging each of the content serving sites (col. 3, lines 47-51);

     receiving a reply form each of the content serving sites (col. 3, lines 51-53); and

     determining the response time for each of the content serving sites by computing the

     difference in time from said pinging to said receiving for each of the content serving sites

     (col. 3. lines 53-58).

22.   As per claims 5 and 25, Midorikawa further taught wherein transit time is the time it

takes a content serving site to send a packet to said original location after receiving a query (col.

13, lines 14-18, 28-31).

23.   As per claims 7-8 and 27-28, Midorikawa further taught wherein said sending queries to

each of the content serving sites includes:

     querying each of the content serving sites in order of their response times, longest

     response time first, setting a delay for a query for a particular content serving site from

the time the query to the content serving site with the longest response time as one half of

said particular content serving site's response time (col. 16, lines 33-59).

24. As per claims 9-11 and 29-31, Emens and Midorikawa did not specifically teach wherein

n is 3 and m is 2, nor wherein n may be varied based on some criteria. However, Emens taught

wherein n may be varied for selecting the content server sites correspond to mirror servers

having a low load (col. 9, lines 1-22). It would have been obvious to one of ordinary skill in the

art at the time the invention was made to modify the teaching of Emens to vary n based on some

criteria because this will allow conservation of resources and reduces traffic on the network. (col.

10, lines 38-42).

25. As per claims 12 and 32, Midorikawa further taught wherein said setup phase occurs

when the computer network is first set up (col. 8, lines 42-47).

26. As per claims 13 and 33, Midorikawa further taught wherein said execution phase occurs

when the computer network is operating normally (col. 8, lines 42-47).

27. As per claim 19, Midorikawa taught including a phase determiner coupled to said

response time determiner, said query sender, and said data receiver (col. 15, lines 61-67).

28. Claims 6 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emens

and Midorikawa in view of Jindal et al, U.S. Patent 6,324,580 (hereinafter Jindal).

29.   As per claim 6, Emens and Midorikawa taught the invention substantially as claimed in

claims 1 and 21 above. Emens and Midorikawa did not teach the content of said data. Jindal

taught wherein said data includes at least one record, said record including a transit time, a

network address for said fixed location, and a network address for a content serving site, said

transit time being the transit time between said fixed location an said content serving site (col. 4,

lines 40-col. 5, lines 4; col. 11, lines 17-28).

30.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Emens, Midorikawa and Jindal because Jindal's method

would enhanced Emens's and Midorikawa's systems by allowing users to be routed, and their

requests satisfied by, the content serving site according to said data (col. 4, lines 49-57).

CONCLUSION

31.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

        Fujishima et al, U.S. Patent 5,734,836, disclosed a method of timing transmission of data

        using transmission time delays.

        Rune, U.S. Patent 6,304,913, disclosed a system for selecting a mirror server to improve

        response times

32.   A shortened statutory period for reply to this Office action is set to expire THREE

MONTHS from the mailing date of this action.

33.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Philip C Lee whose telephone number is (703)305-7721. The

examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other

Friday.

34.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng Ai An can be reached on (703)305-9678. The fax phone number for the

organization where this application or proceeding is assigned is (703)746-7239.

35.   Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703)350-6121.

P.L.

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100